



P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (ISRA): 5.38
IJPESH 2017; 4(1): 207-208
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www.kheljournal.com
Received: 05-11-2016
Accepted: 06-12-2016

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International Journal of Physical Education, Sports and Health

Comparison of selected physical fitness components between ball and racket games players

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Abstract

The purpose of the study was to conduct examine the comparison study of physical fitness components between ball and racket games players. Total 200 subjects were randomly selected (100 from ball players i.e. basketball and football, 100 from racket players i.e. badminton and tennis players). The age of the players ranged from 16 and above. Physical fitness components namely strength and flexibility were considered as criterion for the study. The selected physical fitness components i.e. strength and flexibility were measured with respective tests. Mean and Standard deviation of each component were calculated. Independent t-test was applied to analyze the significance of difference between means. All statistical calculations were done by standard statistical procedure. Level of confidence was fixed at 0.05. It is concluded from the result that no significant difference was observed in strength between ball and racket games players and a significant difference was found between ball and racket games players in term of their flexibility

Keywords: Physical fitness, ball games, racket games, flexibility, strength

Introduction

Physical fitness is defined as being in a general state of health and well-being or specifically the ability to perform aspects of sports or occupations. Strength and flexibility are very important part of physical fitness. Every move you make requires muscle strength. In technical terms, muscle strength describes the force generated when a muscle or group of muscles contracts. In practical terms, muscle strength refers to the capacity to lift, push or pull against weight. Maintaining muscle strength over the long term is an essential component of your good health. While flexibility is needed to perform everyday activities with relative ease to get out of bed, lift children, or sweep the floor, we need flexibility. Flexibility tends to deteriorate with age, often due to a sedentary lifestyle. Without adequate flexibility, daily activities become more difficult to perform.

Physical fitness: Physical fitness is a general state of health and well-being and, more specifically, the ability to perform aspects of sports, occupations and daily activities

Flexibility: the ability to perform movements with greater range of motion or large amplitude.

Strength: strength is the ability of a muscle to get over resistance.

Purpose of the Study: The main purpose of the present study was to compare the strength and flexibility between ball players and racket games players at level of inter-university participation.

Objective of the Study: To see the significant differences in strength and flexibility between ball and racket games players at level of inter-university participation.

Hypothesis of the Study: There would be no significance difference in strength and flexibility between ball and racket games players.

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Procedure and Methodology: A total of 200 players comprising 100 players from ball games and 100 players from racket games were randomly selected at the level of inter-university participation for the study. The age of all respondents was 16 above. The test was conducted by using standardized procedure. The strength and flexibility was measured by using standing broad jump sit and reach test. Measure unit of the strength and flexibility was centimeters.

The Analysis of Data

Data was analyzed by statistical technique T test. The level of significance was set at 0.05.

Table 1: Showing the mean value, standard deviation and ‘t’ score of Standard Broad Jump

Sr. No.	Name of the Game	Sample Size	Mean	Standard Deviation	‘t’ Value
1	Ball games	100	224.81	20.06	.879**
2	Racket games	100	222.32	20.00	

**Not significance at 0.05 level df = 198

Table- 1 reveals that the mean value of strength of ball game players as well as racket games players is 224.81 and 222.32 respectively whereas the value of its standard deviation in case of both games players is 20.06 and 20.00 respectively. The t-value of the variable strength of players of both games is .879 showing a declining trend in comparison to the value at significance level 0.05 i.e. 1.972. It means hypothesis which was formulated earlier that there would be no significance difference in strength between ball games and racket games players was proved.

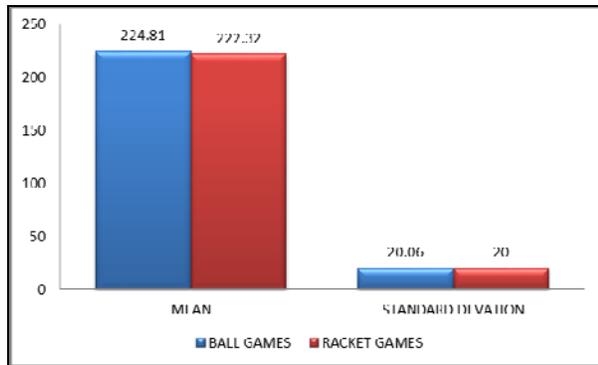


Fig 1: Comparison of Strength between Ball and Racket Games Players

Table 2: Showing the mean value, standard deviation and ‘t’ score of Sit and Reach Test

Sr. No.	Name of the Game	Sample Size	Mean	Standard Deviation	‘t’ Value
1	Ball games	100	34.86	8.47	2.49*
2	Racket games	100	31.94	8.04	

*Significance at 0.05 level df = 198

The above table shows that the mean scores of ball games players is greater than that of racket games players and the same position is in case of their standard deviation scores. ‘t’ value of Sit and Reach Test is 2.49 which is greater than table value i.e. 1.972 at 0.05 level of confidence. It means hypothesis which was formulated earlier that there would be no significance difference in flexibility between ball and racket games players was disproved.

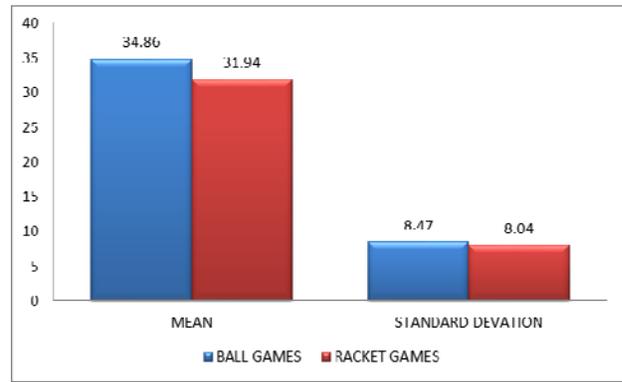


Fig 2: Comparison Of Flexibility Between Ball And Racket Games Players

Result and Conclusion: On the basis of the study, the following conclusion was drawn.

- There was no significant difference in the strength between ball games players and racket games players at the level of inter-university participation.
- Significance difference was found in flexibility between ball games players and racket games players at the level of inter-university. It is clear that flexibility of ball games players have more than racket games players.

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